Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>Listing of Claims:</u>

1.   (Currently Amended) A tag embedded with data, the tag comprising dots, each dot having a position, the tag conforming to a tag format structure, wherein:

the tag format structure contains a plurality of entries, there being an entry associated with each dot's position;

each entry specifying whether the associated dot is data or not<u>; and</u>

<u>the tag is printed with an infrared absorptive ink that can be read with a tag sensing device</u>.

2.   (Original) The tag of claim 1, wherein:

each entry of the tag format structure comprises bits including a low order bit and the entry is interpreted according to the low order bit.

3.   (Original) The tag of claim 2, wherein:

the low order bit determines if the entry is interpreted as data or not.

4.   (Original) The tag of claim 3, wherein:

the low order bit indicates that the entry is data and a remainder of the bits of the entry is interpreted as an address.

5.   (Original) The tag of claim 1, wherein:

each entry is interpretable independently without reliance on state information.

6.   (Original) The tag of claim 1, wherein:

the tag format structure is comprised of one or more lines;

the tag is scaled by a factor of N by scaling the number of entries in the tag format structure;

the scaling of the tag format structure being a replication of each entry N times and a replication of each line N times.

7.   (Original) The tag of claim 1, wherein:

each dot is a macrodot generated from the tag format structure.

8.   (Original) The tag of claim 1, wherein:

dot positions have a relationship and the relationship takes into account a redundancy encoding of the data.

9.   (Original) The tag of claim 1, wherein:

the tag is produced using a tag encoder in which the tag format structure is implemented, the encoder encoding fixed data together with tag specific data into the tag.

10.   (Cancelled).

11.   (Original) The tag of claim 9, wherein:

the tag encoder merges encoded tag data with a basic tag structure and places dots in an output FIFO in a correct order for subsequent printing.

12.   (Original) The tag of claim 11, wherein:

the encoded tag data is generated from the original data bits on-the-fly to minimize buffer space.

13.   (Original) The tag of claim 1, wherein:

dots may be located in a data area or located in an arbitrarily shaped constant background pattern.

14.   (Original) The tag of claim 13, wherein:

the background pattern further comprises a locator component.

15.   (Original) The tag of claim 14, wherein:

the locator component is circular.

16.   (Original) The tag of claim 9, wherein:

the encoding further comprises double indirection encoding.

17.   (Original) The tag of claim 1, wherein:

the dots are printed as continuous tone dots.

18.   (Original) The tag of claim 1, wherein:

each entry of the tag format structure comprises a selected and the entry is interpreted according to the selected bit.

19.   (Original) The tag of claim 18, wherein:

the selected bit determines if the entry is interpreted as data or not.

20.   (Original) The tag of claim 19, wherein:

the selected bit indicates that the entry is data and a remainder of the bits of the entry is interpreted as an address.